

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-22-AD; Amendment 39-12892; AD 2002-19-12]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-200B, -300, -400, -400D, and -400F Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 747-200B, -300, -400, -400D, and -400F series airplanes; that currently requires repetitive inspections to detect cracking of fire extinguisher discharge tubes in certain engine struts, and corrective action, if necessary. For certain airplanes, that AD also provides for an optional modification of the fire extinguisher discharge tubes, which constitutes terminating action for the repetitive inspections. This amendment makes the previously optional modification of the fire extinguisher discharge tubes mandatory for all affected airplanes and adds one airplane to the applicability. This amendment is prompted by a report that the check tee valve at the top of an engine strut can be damaged such that no extinguishing agent can get to the engine. The actions specified by this AD are intended to prevent blockage of the check tee valve and cracks in the fire extinguisher discharge tubes in the engine struts, preventing the fire extinguishing agent from being delivered to the engine or reducing the amount delivered to the engine, which could permit a fire to spread from the engine to the wing of the airplane.

DATES: Effective November 5, 2002.

The incorporation by reference of certain publications, as listed in the regulations, is approved by the Director of the Federal Register as of November 5, 2002.

The incorporation by reference of certain other publications, as listed in the regulations, was approved previously by the Director of the Federal Register as of April 25, 2000 (65 FR 18881, April 10, 2000).

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Technical Information: Sulmo Mariano, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2686; fax (425) 227-1181.

Other Information: Judy Golder, Airworthiness Directive Technical Editor/Writer; telephone (425) 687-4241, fax (425) 227-1232. Questions or comments may also be sent via the Internet using the following address: judy.golder@faa.gov. Questions or comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2000-07-10, amendment 39-11664 (65 FR 18881, April 10, 2000); which is applicable to certain Boeing Model 747-200B, -300, -400, -400D, and -400F series airplanes; was published in the Federal Register on April 3, 2002 (67 FR 15755). The action proposed to continue to require repetitive inspections to detect cracking of fire extinguisher discharge tubes in certain engine struts, and corrective action, if necessary. The action proposed to require a modification of the fire extinguisher discharge tubes, which would constitute terminating action for the repetitive inspections, and also proposed to add one additional airplane to the applicability.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Give Credit for Modification Per Original Issue of Service Bulletin

Several commenters, including the Air Transport Association of America (on behalf of its members), request that the FAA revise the proposed AD to give credit for modifications accomplished in accordance with the original issue of Boeing Service Bulletin 747-26-2233, dated May 11, 1995. (Paragraph (b) of the proposed AD refers to Boeing Alert Service Bulletin 747-26A2233, Revision 1, dated November 16, 2000, as the appropriate source of service information for modification of the routing of the fire extinguishing tubes on Boeing Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines.) The commenters note that there are no differences between the work instructions of the original issue and Revision 1 of that service bulletin.

The FAA concurs with the commenters' request. We note that paragraph (b) of AD 2000-07-10 refers to the original issue of Boeing Service Bulletin 747-26-2233 as the appropriate source of service information for accomplishment of the optional terminating action in that AD. This provision should have been included in the proposed AD. Accordingly, we have revised paragraph (b) of this AD to allow modification in accordance with either the original issue or Revision 1 of Boeing Service Bulletin 747-26-2233. Such modification will constitute terminating action for Boeing Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines.

Explanation of Change Made to Proposal

The FAA has changed all references to a "detailed visual inspection" in the proposed AD to "detailed inspection" in this final rule.

Conclusion

After careful review of the available data, including the comments noted above, we have determined that air safety and the public interest require the adoption of the rule with the changes previously described. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 268 airplanes of the affected design in the worldwide fleet. We estimate that 47 airplanes of U.S. registry would be affected by this proposed AD.

The inspections that are currently required by AD 2000-07-10, and retained in this AD, take approximately 1 work hour per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the currently required inspections on U.S. operators is estimated to be \$2,820, or \$60 per airplane, per inspection cycle.

The new modification required by this AD will take approximately 32 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$5,488 per airplane. Based on these figures, the cost impact of this new requirement on U.S. operators is estimated to be \$348,176, or \$7,408 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-11664 (65 FR 18881, April 10, 2000), and by adding a new airworthiness directive (AD), amendment 39-12892, to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-19-12 Boeing: Amendment 39-12892. Docket 2001-NM-22-AD. Supersedes AD 2000-07-10, Amendment 39-11664.

Applicability: Model 747-200B, -300, -400, -400D, and -400F series airplanes equipped with General Electric CF6-80C2 series engines, line number 679 through 1060 inclusive; and Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines, line numbers 696 through 1062 inclusive; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent blockage of the check tee valve and cracks in the fire extinguisher discharge tubes in the engine struts, preventing the fire extinguishing agent from being delivered to the engine or reducing the amount delivered to the engine, which could permit a fire to spread from the engine to the wing of the airplane, accomplish the following:

Restatement of Requirements of AD 2000-07-10:

Repetitive Inspections and Corrective Actions

(a) For Model 747-200B, -300, -400, -400D, and -400F series airplanes equipped with General Electric CF6-80C2 series engines, line number 679 through 1060 inclusive; and Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines, line numbers 696 through 1061 inclusive: Within 30 days after April 25, 2000 (the effective date of AD 2000-07-10, amendment 39-11664), perform a detailed inspection to detect cracking of the fire extinguisher discharge tubes in the number 2 and number 3 engine struts, in accordance with Boeing Alert Service Bulletin 747-26A2266, dated March 3, 2000.

Note 2: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at

intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) If no cracking is detected, repeat the inspection thereafter at intervals not to exceed 18 months.

(2) If any cracking is detected, prior to further flight, replace the cracked tube with a new or serviceable part, in accordance with Boeing Alert Service Bulletin 747-26A2266, dated March 3, 2000. Repeat the inspection required by paragraph (a) of this AD within 18 months after the replacement and thereafter at intervals not to exceed 18 months.

New Requirements of This AD

Modification—Airplanes With Pratt & Whitney PW4000 Engines

(b) For Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines: Within 24 months after the effective date of this AD, modify the routing of the fire extinguishing tubes between the inboard fire bottles and the inboard engines in accordance with Boeing Service Bulletin 747-26-2233, dated May 11, 1995; or Boeing Alert Service Bulletin 747-26A2233, Revision 1, dated November 16, 2000. Accomplishment of the requirements of this paragraph constitutes terminating action for the repetitive inspections required by paragraph (a) of this AD for Model 747-400 and 747-400F series airplanes equipped with Pratt & Whitney PW4000 engines.

Modification—Airplanes With General Electric CF6-80C2 Series Engines

(c) For 747-200B, -300, -400, -400D, and -400F series airplanes equipped with General Electric CF6-80C2 series engines: Within 24 months after the effective date of this AD, modify the routing of the fire extinguishing tubes between the inboard fire bottles and the inboard engines in accordance with Boeing Alert Service Bulletin 747-26A2267, dated December 20, 2000. Accomplishment of the requirements of this paragraph constitutes terminating action for the repetitive inspections required by paragraph (a) of this AD for Model 747-200B, -300, -400, -400D, and -400F series airplanes equipped with General Electric CF6-80C2 engines.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with §§ sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) The actions shall be done in accordance with Boeing Alert Service Bulletin 747-26A2266, dated March 3, 2000; Boeing Service Bulletin 747-26-2233, dated May 11, 1995, or Boeing Alert Service Bulletin 747-26A2233, Revision 1, dated November 16, 2000; and Boeing Alert Service Bulletin 747-26A2267, dated December 20, 2000; as applicable.

(1) The incorporation by reference of Boeing Alert Service Bulletin 747-26A2233, Revision 1, dated November 16, 2000; and Boeing Alert Service Bulletin 747-26A2267, dated December 20, 2000; is approved by the Director of the Federal Register, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Boeing Alert Service Bulletin 747-26A2266, dated March 3, 2000; and Boeing Service Bulletin 747-26-2233, dated May 11, 1995; was approved previously by the Director of the Federal Register as of April 25, 2000 (65 FR 18881, April 10, 2000).

(3) Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on November 5, 2002.

Issued in Renton, Washington, on September 19, 2002.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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